

Books

User-Centered Design: An Integrated Approach, Karel Vredenburg, Scott Isensee, and Carol Righi, Prentice Hall PTR, Upper Saddle River, NJ (2002). 247 pp. with CD-ROM. (ISBN 0-13-091295-6).

With the growth of consumer markets and increased competition for market share, it is hard these days not to encounter the term “usability” in the computer industry. In today’s market, functionality and “speeds and feeds” are no longer sufficient conditions for the design of successful products. Even enterprise customers are no longer satisfied with raw power and lightning-fast performance in the designs of the systems and software they purchase. Functionality isn’t enough; users are demanding that ease of use be designed into the products they buy. In fact, Boeing Corp. and a number of other companies recently announced that before they will purchase a product, they now require that vendors demonstrate the usability of their designs through usability testing. Similarly, EU (European Union) companies are looking for products that meet the ISO 9241-11 standard, which defines usability as “the extent to which a product can be used by specified users to achieve specified goals in a specified context of use with effectiveness, efficiency, and satisfaction.”

User-Centered Design: An Integrated Approach is an interesting history of the ways in which IBM responded to this evolution in the technology market. Its authors were all champions of UCD (User-Centered Design) throughout the 1990s. Karel Vredenburg was responsible for the development of IBM’s approach to UCD in the early 1990s. Scott Isensee and Carol Righi were significant contributors to revisions of the original approach and played leading roles in the development of educational programs aimed at spreading the UCD approach to product de-

velopment throughout the company. The authors’ emphasis on developing approaches to UCD and their experience offering training programs are noteworthy because they give the book its distinctive features.

User-Centered Design: An Integrated Approach is almost entirely about the “integrated approach” that companies should use in order to develop a user-centered product development cycle. In other words, the book doesn’t attempt to teach design techniques from a human factors perspective, nor is it intended to be a primer on usability testing methodologies. Instead, it focuses on the high-level process that a multidisciplinary design team should use in order to ensure that ease of use is a characteristic of the product being designed.

The authors’ previous experience offering workshops and training programs in UCD is clear from the richness of the book’s design. Visual learners will be pleased to learn that *User-Centered Design: An Integrated Approach* is not just another prose-only introduction to UCD. There are so many diagrams and graphics in the book that it doesn’t take much imagination to see the ways that the authors’ slides from their workshop presentations probably evolved into the book. Almost every page in the book has some kind of visual aid that supports the text. In addition, the accompanying CD-ROM offers nine different video clips that further illustrate principles discussed in the book. Those readers seeking hard-headed, practical examples will also be pleased by the authors’ use of sample case studies, which illustrate the concepts being discussed in each section of the book. Taken from an impressive array of the authors’ practical,

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hands-on experiences with the development of actual products, these case studies make a compelling argument for the viability of the UCD approach offered in the book. The authors are not merely describing a theoretical process that might work; instead, they are illustrating a process that has worked for practitioners in the trenches.

Because *User-Centered Design: An Integrated Approach* is a discussion of an approach that companies may use to implement UCD, the book's five chapters are loosely organized around the chronology of implementing the integrated approach. Chapter 1 begins with a discussion of ways to consider your own institution's current use of UCD in its product development cycle, and it provides strategies for discovering points of resistance to change within your organization. Of particular interest in this chapter is a section entitled "Dealing with the 'Yeah, buts . . .'" which offers compelling counter-arguments to those members of an organization who argue that UCD is a good idea but too expensive, time-consuming, or resource-intensive. Chapter 2 provides an overview of the authors' "integrated approach," which is based on the following six UCD principles:

1. *Set business goals.* Determining the target market, intended users, and primary competition is central to all design and user participation.
2. *Understand users.* An understanding of the users is the driving force behind all design.
3. *Design the total customer experience.* Everything a customer sees, hears, and touches is designed together by a multidisciplinary team.
4. *Evaluate designs.* User feedback is gathered often with rigor and speed and drives product design.
5. *Assess competitiveness.* Competitive design requires a relentless focus on the ways users currently carry out the tasks and a determination to create designs that add value.
6. *Manage for users.* User feedback is integral to product plans, priorities, and decision-making.

Chapter 3 is probably the strongest chapter in the book. It discusses the issues involved in actually introducing the integrated UCD approach into an organization. It begins with an excellent section on ways to educate various stakeholders in an organization and even provides Microsoft PowerPoint** slides that readers can use for short programs at their own sites. Also discussed in this chapter are infrastructure elements such as funding sources, lab setups,

and key personnel, which must be put into place before a UCD approach can be successfully introduced.

Chapter 4 discusses how, after the infrastructure needs have been met, UCD can be deployed, and focuses primarily on using the appropriate usability-testing technique at the appropriate phase of a product's development cycle. During the concept phase of a product's development, for example, familiar techniques like task analysis, contextual inquiries, use cases, usability walk-throughs, and several others are discussed. Finally, Chapter 5 is entitled "Optimizing Your Implementation of the Approach," and discusses synchronous conferencing software, Web-based applications, and other technologies that have been developed at IBM in order to reduce the time and effort required to collect and analyze user data.

User-Centered Design: An Integrated Approach is the kind of accessible and pragmatic book about designing for usability that busy professionals need. Because it was written by people who have led the UCD charge from the trenches, this book offers the kinds of strategic insights and practical knowledge necessary for success in industry contexts. If you're looking for a "how-to" introduction to usability testing methodologies or a general overview of interface design principles, then you will probably want to look at books like *A Practical Guide to Usability Testing*, the *Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests*, or *The Usability Engineering Lifecycle, a Practitioner's Handbook for the User Interface*. If, however, you are looking for a book that will help you transform your organization so that you can put UCD into actual practice, then *User-Centered Design: An Integrated Approach* offers precisely the kind of practical, business-focused skill set that you want, and it will sit comfortably on the shelf next to those other texts.

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Out of the Box: Strategies for Achieving Profits Today and Growth Tomorrow through Web Services, John Hagel III, Harvard Business School Press, Boston (2002). 212 pp. (ISBN 1-57851-680-3).

At first glance, you might think that *Out of the Box* is a book about Web services. Fortunately, it is not

“yet another Web services book” for technology junkies; there are plenty of those books available. *Out of the Box* is primarily a book about business change for business strategists, managers, and executives. A quotation from the author of the book captures the relationship between business change and Web services: “A business must keep in mind that organizational systems can be enhanced by information technology, but not reduced to information technology.” John Hagel’s book emphasizes organizational and business trends and then ties in the impacts that Web services have on them. In the process, John clearly explains the immediate and long-term business value of Web services.

The author certainly has the breadth and depth of expertise to cause the reader to pause, open his mind, and listen for a while. John Hagel is an author of *Net Gain* and *Net Worth* and sports experience as a strategist, entrepreneur, and consultant. His straightforward writing style makes it possible for a technologist (like myself) to appreciate and follow his reasoning on technical and economic change. In addition, he illustrates his points by using examples from several well-known companies.

Part 1 commiserates with business and IT managers and the challenges they face now and in the future. John concisely identifies these challenges as “boxes”: Financial Performance Pressures, Enterprise Infrastructures, Enterprise Boundaries, and Mental Models. He then introduces ways to break through the walls of these boxes in pursuit of growth and profit. The rest of this section is an excellent explanation of Web services for managers. This chapter is the groundwork for showing the value of Web services for solving current business problems and for the facilitation of organizational change. The author explains the business and technical forces that have been the “mother of necessity”: the lack of a dominant force to dictate technologies, which leads to diverse platforms and applications and constantly changing business requirements. He also explains the catalyst technologies: the World Wide Web and XML (Extensible Markup Language).

Rather than digging into the technology of Web services, John explains *why* Web services are important: simplicity at the endpoints, loose coupling to handle diversity and flexibility, and openness of Web service technologies being developed as extensible industry standards. The most significant point that he has the insight and foresight to grasp and explain is the importance of the development of the service

grid in the success of Web services as a business-enabling technology. He also identifies the opportunity for enabling services for service management, resource knowledge management, transport management, and share utilities. Some of these services are already emerging in standards and products. John finishes this chapter with a bit of reality on some of the obstacles to his vision of service grids for businesses: fragmentation of standards, limited availability of enabling services, and the difficulty of developing of shared semantics. The last chapter in this section analyzes the advent and demise of application service providers (ASPs) as an illustration of why Web services will be more successful than ASPs and describes pitfalls to be avoided in deploying Web services.

Part 2 provides pragmatic advice on how to deploy Web service technologies and architectures in enterprises today. It tells how managers can justify a minimal investment in Web services as well as how to invest with an eye on the emerging nature of Web services by taking advantage of existing technology and deploying implementations incrementally. Beginning with the most profitable, the author recommends starting implementations in scenarios connecting enterprises, that is, at the “edge.” Although I agree wholeheartedly with most of John’s insights, I think that he does not give enough consideration to the application integration opportunities within the enterprise. Certainly enabling business-to-business applications was a motivating scenario for the development of Web services; however, many of the initial successful deployments have been as an intra-enterprise application integration technology. Readers should consider the value of Web services for transforming modularity and flexibility within the corporation as well. Even so, this section will help managers develop and articulate their plans for deployment of Web services.

Part 3 describes the origin of business trends that have already been underway for years and the impact of these trends on forward-looking enterprises. Process networks are emerging from traditional business processes. These process networks exist for supply chains and customer management. It is clear that nearly all businesses today are developing process networks, whether they realize it or not. The differentiator is how well they recognize, leverage, and manage their supply and sales partners. Web services are going to be an enabling technology in automating and facilitating the management of the process networks, something that is done manually today.

Another major trend in business is what John Hagel calls “unbundling to rebundle.” This trend refers to breaking up a company into three businesses that can adhere to their own motivating factors: customer relationship, infrastructure manufacturing, and product innovation and commercialization. The understanding of these three businesses and their motivations may be one of the most valuable points of the book. John goes so far as to illustrate how any of these businesses can be owned outside of the enterprise, leaving the enterprise to focus on its true line of business. Like process networks, Web services can help codify and automate the connections between these businesses.

Part 4 lays out organizational changes for executives and strategists to consider. This section is insightful and practical. John explains leveraged growth strategies for accessing assets that the business needs even when the business does not own them. Putting the company in the position of aggregator, orchestrator, or industry shaper is a key factor in executing this strategy. He explains how to create a plan to change organizations to take advantage of process networks, unbundling, and leverage. He also gives a detailed approach on how to execute that plan using short-term decisions that achieve a long-term plan. Finally, he lays out a program for organizational change for strategists and executives, identifying key Web service skills necessary to enact these visionary changes.

Out of the Box captures and explains business trends and then explains why and how Web services can accelerate these trends. This book is excellent for managers and executives trying to understand what the hype about Web services means to them. It is also an excellent book for technologists to help them understand the potential impact and goals for the deployment of Web service technologies in their companies.

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